What is claimed is:

1. A method for detecting motion pixels in image, comprising steps of:

step 1: obtaining difference image between current image and background image;

step 2: finding a binarization threshold from the distribution of all absolute pixel values in said difference image;

step 3: using all or part of the pixel values, in said difference image, whose absolute values are smaller than or equal to said binarization threshold to compensate the effect of illumination change and to obtain an updated difference image;

step 4: finding a binarization threshold from the distribution of all absolute pixel values in said updated difference image, changing the pixel values whose absolute values are larger than said binarization threshold to high, and changing the pixel values whose absolute values are equal to or smaller than said binarization threshold to low, thereby obtaining a binarized updated difference image; and

step 5: determining pixels in said binarized updated difference image whose values are high as motion pixels.

2. The method for detecting motion pixels in image according to claim 1, wherein said step of obtaining difference image between current image and background image in step 1 is performed by subtracting said background image from said current image.

3. The method for detecting motion pixels in image according to claim 1, wherein said step of obtaining difference image between current image and background image in step 1 is performed by eliminating said background image from said current image.

4. The method for detecting motion pixels in image according to claim 1, wherein said step of obtaining difference image between current image and background image in step 1 is performed by subtracting said background image after performing a logarithmic operation from said current image after performing a logarithmic operation.

5. The method for detecting motion pixels in image according to claim 1, wherein said step of finding a binarization threshold from the distribution of all absolute pixel values in said difference image in step 2 comprises steps of:

(1) counting the occurrences of all absolute pixel values to plot a cumulative histogram of pixel values, wherein the transverse axis of said cumulative histogram indicates all possible absolute pixel values arranged in ascending order, and the longitudinal axis indicates the cumulative occurrence count equal to or smaller than the absolute pixel values;

(2) finding a value between the minimum absolute pixel value and the maximum absolute pixel value, such that the two linear segments constructed by the occurrence count of the minimum absolute pixel value, the cumulative occurrence count of the absolute pixel values equal to or smaller than the selected value and the cumulative occurrence count of the absolute pixel values equal to or smaller than the maximum absolute pixel value optimally approximate said cumulative histogram; defining the coordinate of every point in the linear segments constructed by the minimum absolute pixel value, the selected value and the maximum absolute pixel value as (i, L_i), and defining the coordinate of every point in the envelope line of the cumulative histogram as (i, E_i), such that the pixel value obtaining the minimum of $\sum_i |L_i - E_i|$, the pixel value obtaining the minimum of $\sum_i (L_i - E_i)^2$ or the pixel value obtaining the maximum correlation coefficient of $\{L_i\}$ and $\{E_i\}$ sequences is regarded as said binarization threshold.

6. The method for detecting motion pixels in image according to claim 1, wherein said step of finding a binarization threshold from the distribution of all absolute pixel values in said difference image in step 2 comprises steps of:

(1) counting the occurrences of all absolute pixel values to plot a cumulative histogram of pixel values, wherein the transverse axis of said cumulative histogram indicates all possible absolute pixel values arranged in ascending order, and the longitudinal axis indicates the cumulative occurrence percentage equal to or smaller than the absolute pixel values;

(2) finding a value between the minimum absolute pixel value and the maximum absolute pixel value, such that the two linear segments constructed by the occurrence percentage of the minimum absolute pixel value, the cumulative occurrence percentage of the absolute pixel values equal to or smaller than the selected value and the cumulative occurrence percentage of the absolute pixel values equal to or smaller than the maximum absolute pixel value optimally approximate said cumulative histogram; defining the coordinate of every point in the linear segments constructed by the minimum absolute pixel value, the selected value and the maximum absolute pixel value as (i, L_i), and defining the coordinate of every point in the envelope line of the cumulative histogram as (i, E_i), such that the pixel value obtaining the minimum of $\sum_i |L_i - E_i|$, the pixel value obtaining the minimum of $\sum_i (L_i - E_i)^2$ or the pixel value obtaining the maximum correlation coefficient of $\{L_i\}$and $\{E_i\}$sequences is regarded as said binarization threshold.

7. The method for detecting motion pixels in image according to claim 1, wherein said step of using all or part of the pixel values, in difference image, whose absolute values are smaller than or equal to said binarization threshold to compensate the effect of illumination change in step 3 is performed by using an

average value of all or part of the pixel values, in difference image, whose absolute values are smaller than or equal to said binarization threshold as a correction value, and then subtracting said correction value from difference image, thereby obtaining said updated difference image.

8. The method for detecting motion pixels in image according to claim 1, wherein said step of using all or part of the pixel values, in difference image, whose absolute values are smaller than or equal to said binarization threshold to compensate the effect of illumination change in step 3 is performed by using an average value of all or part of the pixel values, in difference image, whose absolute values are smaller than or equal to said binarization threshold as a correction value, and then eliminating said correction value from difference image, thereby obtaining said updated difference image.

9. The method for detecting motion pixels in image according to claim 1, wherein said step of finding a binarization threshold from the distribution of all absolute pixel values in said difference image in step 4 comprises steps of:

(1) counting the occurrences of all absolute pixel values to plot a cumulative histogram of pixel values, wherein the transverse axis of said cumulative histogram indicates all possible absolute pixel values arranged in ascending order, and the longitudinal axis indicates the cumulative occurrence count equal to or smaller than the absolute pixel values;

(2) finding a value between the minimum absolute pixel value and the maximum absolute pixel value, such that the two linear segments constructed by the occurrence count of the minimum absolute pixel value, the cumulative occurrence count of the absolute pixel values equal to or smaller than the selected value and the cumulative occurrence count of the absolute pixel values equal to or smaller than the maximum absolute pixel value optimally approximate said

cumulative histogram; defining the coordinate of every point in the linear segments constructed by the minimum absolute pixel value, the selected value and the maximum absolute pixel value as (i, L_i), and defining the coordinate of every point in the envelope line of the cumulative histogram as (i, E_i), such that the pixel value obtaining the minimum of $\sum_i |L_i - E_i|$, the pixel value obtaining the minimum of $\sum_i (L_i - E_i)^2$ or the pixel value obtaining the maximum correlation coefficient of $\{L_i\}$and $\{E_i\}$sequences is regarded as said binarization threshold.

10. The method for detecting motion pixels in image according to claim 1, wherein said step of finding a binarization threshold from the distribution of all absolute pixel values in said difference image in step 4 comprises steps of:

(1) counting the occurrences of all absolute pixel values to plot a cumulative histogram of pixel values, wherein the transverse axis of said cumulative histogram indicates all possible absolute pixel values arranged in ascending order, and the longitudinal axis indicates the cumulative occurrence percentage equal to or smaller than the absolute pixel values;

(2) finding a value between the minimum absolute pixel value and the maximum absolute pixel value, such that the two linear segments constructed by the occurrence percentage of the minimum absolute pixel value, the cumulative occurrence percentage of the absolute pixel values equal to or smaller than the selected value and the cumulative occurrence percentage of the absolute pixel values equal to or smaller than the maximum absolute pixel value optimally approximate said cumulative histogram; defining the coordinate of every point in the linear segments constructed by the minimum absolute pixel value, the selected value and the maximum absolute pixel value as (i, L_i), and defining the coordinate of every point in the envelope line of the cumulative histogram as (i, E_i), such that the pixel value obtaining the minimum of $\sum_i |L_i - E_i|$, the pixel value obtaining

the minimum of $\sum_i (L_i - E_i)^2$ or the pixel value obtaining the maximum correlation coefficient of $\{L_i\}$and $\{E_i\}$sequences is regarded as said binarization threshold.